RE22R2MXMU
Multifunction Timer Relay - 24VDC/24..240 V AC - 2 C/O

Main
Range of product Zelio Time
Product or component type Modular timing relay
Discrete output type Relay
Device short name RE22
Nominal output current 8 A

Complementary
Contacts type and composition 1 C/O timed contact
1 C/O timed or instantaneous contact
Time delay type Pt
P
O
A
Tt
Ah
N
Tt
W
Time delay range 0.1...1 s
1...10 h
1...10 s
6...60 min
10...100 h
6...60 s
1...10 min
Control type Rotary knob front panel
[Us] rated supply voltage 24...240 V AC
24 V DC
Voltage range 0.85...1.1 Us
Supply frequency 50...60 Hz +/- 5 %
Connections - terminals Screw terminals, 2 x 1.5 mm² with cable end
Screw terminals, 2 x 2.5 mm² without cable end
<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tightening torque</strong></td>
<td>0.6…1 N.m conforming to IEC 60947-1</td>
</tr>
<tr>
<td><strong>Housing material</strong></td>
<td>Self-extinguishing</td>
</tr>
<tr>
<td><strong>Repeat accuracy</strong></td>
<td>+/- 0.5 % conforming to IEC 61812-1</td>
</tr>
<tr>
<td><strong>Temperature drift</strong></td>
<td>+/- 0.05 %/°C</td>
</tr>
<tr>
<td><strong>Voltage drift</strong></td>
<td>+/- 0.2 %/V</td>
</tr>
<tr>
<td><strong>Setting accuracy of time delay</strong></td>
<td>+/- 10 % of full scale at 25 °C conforming to IEC 61812-1</td>
</tr>
<tr>
<td><strong>Control signal pulse width</strong></td>
<td>30 ms</td>
</tr>
<tr>
<td></td>
<td>100 ms under load</td>
</tr>
<tr>
<td><strong>Insulation resistance</strong></td>
<td>100 MOhm at 500 V DC conforming to IEC 60664-1</td>
</tr>
<tr>
<td><strong>Recovery time</strong></td>
<td>120 ms on de-energisation</td>
</tr>
<tr>
<td><strong>Immunity to microbreaks</strong></td>
<td>10 ms</td>
</tr>
<tr>
<td><strong>Power consumption in VA</strong></td>
<td>50 VA at 240 V AC</td>
</tr>
<tr>
<td><strong>Power consumption in W</strong></td>
<td>0.7 W at 24 V DC</td>
</tr>
<tr>
<td><strong>Breaking capacity</strong></td>
<td>2000 VA</td>
</tr>
<tr>
<td><strong>Minimum switching current</strong></td>
<td>10 mA at 5 V</td>
</tr>
<tr>
<td><strong>Maximum switching current</strong></td>
<td>8 mA</td>
</tr>
<tr>
<td><strong>Maximum switching voltage</strong></td>
<td>250 V</td>
</tr>
<tr>
<td><strong>Electrical durability</strong></td>
<td>100000 cycles for resistive load, 8 A at 250 V, AC</td>
</tr>
<tr>
<td><strong>Mechanical durability</strong></td>
<td>10000000 cycles</td>
</tr>
<tr>
<td><strong>Rated impulse withstand voltage</strong></td>
<td>5 kV for 1.2…50 µs conforming to IEC 60664-1</td>
</tr>
<tr>
<td></td>
<td>5 kV conforming to IEC 61812-1</td>
</tr>
<tr>
<td><strong>Power on delay</strong></td>
<td>100 ms</td>
</tr>
<tr>
<td><strong>Safety reliability data</strong></td>
<td>B10d = 170000</td>
</tr>
<tr>
<td></td>
<td>MTTFd = 182.6 years</td>
</tr>
<tr>
<td><strong>Mounting position</strong></td>
<td>Any position in relation to normal vertical mounting plane</td>
</tr>
<tr>
<td><strong>Mounting support</strong></td>
<td>35 mm DIN rail conforming to EN/IEC 60715</td>
</tr>
<tr>
<td><strong>Status LED</strong></td>
<td>LED green (flashing) for timing in progress</td>
</tr>
<tr>
<td></td>
<td>LED green (steady) for power ON</td>
</tr>
<tr>
<td></td>
<td>LED yellow for relay energised</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>22.5 mm</td>
</tr>
<tr>
<td><strong>Net weight</strong></td>
<td>0.09 kg</td>
</tr>
</tbody>
</table>

### Environment

**Dielectric strength**
- 2.5 kV for 1 mA/1 minute at 50 Hz conforming to IEC 61812-1

**Standards**
- IEC 61812-1
- EN 61000-6-1
- EN 61000-6-3
- EN 61000-6-4
- EN 61000-6-2

**Directives**
- 2006/95/EC - low voltage directive
- 2004/108/EC - electromagnetic compatibility

**Product certifications**
- China RoHS
- CSA
- CCC
- GL
- CULus
- EAC
- CE
- RCM

**Ambient air temperature for operation**
- -20…60 °C

**Ambient air temperature for storage**
- -30…60 °C

**IP degree of protection**
- IP40 housing: conforming to IEC 60529
- IP50 front face: conforming to IEC 60529
- IP20 terminal block: conforming to IEC 60529

**Vibration resistance**
- 20 m/s² (f= 10…150 Hz) conforming to IEC 60068-2-6

**Shock resistance**
- 15 gn for 11 ms conforming to IEC 60068-2-27

**Relative humidity**
- 93 %, without condensation conforming to IEC 60068-2-30

**Electromagnetic compatibility**
- Electrostatic discharge immunity test - test level: 6 kV level 3 (contact discharge) conforming to EN/IEC 61000-4-2
Electrostatic discharge immunity test - test level: 8 kV level 3 (air discharge) conforming to EN/IEC 61000-4-2
Fast transients immunity test - test level: 1 kV level 3 (capacitive connecting clip) conforming to IEC 61000-4-4
Fast transients immunity test - test level: 2 kV level 3 (direct contact) conforming to IEC 61000-4-4
Surge immunity test - test level: 1 kV level 3 (differential mode) conforming to IEC 61000-4-5
Surge immunity test - test level: 2 kV level 3 (common mode) conforming to IEC 61000-4-5
Radiated radio-frequency electromagnetic field immunity test - test level: 10 V level 3 (0.15...80 MHz) conforming to IEC 61000-4-6
Electromagnetic field immunity test - test level: 10 V/m level 3 (80 MHz...1 GHz) conforming to IEC 61000-4-3
Immunity to microbreaks and voltage drops - test level: 30 % (500 ms) conforming to IEC 61000-4-11
Immunity to microbreaks and voltage drops - test level: 100 % (20 ms) conforming to IEC 61000-4-11

Offer Sustainability

<table>
<thead>
<tr>
<th>Sustainable offer status</th>
<th>Green Premium product</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACH Regulation</td>
<td>REACH Declaration</td>
</tr>
<tr>
<td>EU RoHS Directive</td>
<td>Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration</td>
</tr>
<tr>
<td>Mercury free</td>
<td>Yes</td>
</tr>
<tr>
<td>RoHS exemption information</td>
<td>Yes</td>
</tr>
<tr>
<td>China RoHS Regulation</td>
<td>China RoHS declaration</td>
</tr>
<tr>
<td>Environmental Disclosure</td>
<td>Product Environmental Profile</td>
</tr>
<tr>
<td>Circularity Profile</td>
<td>End of Life Information</td>
</tr>
</tbody>
</table>
Internal Wiring Diagram
Function Ad: Pulse Delayed Relay with Control Signal

Description
After power-up, pulsing or maintaining of control contact Y1 starts the timing T. At the end of this timing period T, the output R closes. The output relay will be reset the next time control contact Y1 is pulsed or maintained.
Function Ah : Pulse Delayed Relay (Single Cycle) with Control Signal

Description

After power-up, pulsing or maintaining of control contact Y1 starts the timing T. A single cycle then starts with 2 timing periods T of equal duration (start with output in rest position).

Output relay closes at the end of the first timing period T and reverts to its initial position at the end of the second timing period T.

Control contact Y1 must be reset in order to re-start the single flashing cycle.
Function N: Retriggerable Interval Relay with Control Signal On

Description

After power-up and an initial control pulse C, the output relay closes. If the interval between two control pulses C is greater than the set timing period T, timing elapses normally and the output relay closes at the end of the timing period. If the interval is not greater than the set timing period, the output relay remains closed until this condition is met.
Function O : Retriggerable Interval Delayed Relay with Control Signal On

Description
An initial timing period T begins on energization. At the end of this timing period, the output relay closes.
As soon as there is a control pulse C, the output relay reverts to its initial state until the interval between two control pulses is less than the value of the set timing period T. Otherwise, the output relay closes at the end of the timing period T.
Function P : Pulse Delayed Relay with Fixed Pulse Length

Description
The timing period T begins on energization.
At the end of this period, the output relay closes for a fixed time P.
Function Pt : Pulse Delayed Relay (Summation and Fixed Pulse Length) with Control Signal Off

Description
On energization, timing period T starts (it can be interrupted by operating the Gate control contact G). At the end of this period, the output relay closes for a fixed time P.

\[ T = t_1 + t_2 \quad P = 500\text{ms} \]
Function TL : Bistable Relay with Control Signal On

Description
After power-up, pulsing or maintaining of control contact Y1 switches the output on.
A second pulse on the control contact Y1 switches the output relay off.
Function Tt: Retriggerable Bistable Relay with Control Signal On

Description

After power-up, pulsing or maintaining of control contact Y1 switches output relay on and starts timing T.
The output switches off at the end of the timing period T or following a second pulse on the control contact Y1.

2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).
Function W : Interval Relay with Control Signal Off

Description
After power-up and opening of the control contact, the output(s) close(s) for a timing period T. At the end of this timing period the output(s) revert(s) to its/their initial state.

Legend
Relay de-energised
Relay energised
Output open
Output closed
Y1 : Control contact
R1/R2 : 2 timed outputs
R2 inst. The second output is instantaneous if the right position is selected
T : Timing period
U : Supply

2 timed outputs (R1/R2) or 1 timed output (R1) and 1 instantaneous output (R2 inst.).